

Final

**Human Health Risk Assessment for the
Coeur d'Alene Basin Extending from Harrison to
Mullan on the Coeur d'Alene River and
Tributaries
Remedial Investigation/Feasibility Study**

**Prepared for
Idaho Department of Health and Welfare
Division of Health
Idaho Department of Environmental Quality
U.S. EPA Region X**

June 2001

**Prepared by
TerraGraphics Environmental Engineering, Inc.
URS Greiner
in association with
CH2M HILL**

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	xx
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1-1
1.1 SITE LOCATION AND BACKGROUND	1-1
1.1.1 Community and Industrial Development	1-1
1.1.2 Public Health Concerns	1-3
1.2 STUDY POPULATIONS AND STUDY AREA	1-6
1.3 PURPOSE AND OBJECTIVES	1-6
1.4 SCOPE AND LIMITATIONS	1-7
1.5 REPORT STRUCTURE	1-7
2.0 DATA EVALUATION	2-1
2.1 BASIN GEOGRAPHICAL AREAS	2-1
2.1.1 CSM Unit 1	2-2
2.1.2 CSM Unit 2	2-2
2.1.3 CSM Unit 3	2-3
2.1.4 CSM Unit 4	2-3
2.1.5 CSM Unit 5	2-3
2.2 SELECTION OF DATA USED IN HHRA	2-4
2.2.1 Environmental Data	2-4
2.2.2 Biological Data	2-13
2.3 DATA QUALITY	2-14
2.3.1 Data Quality Objectives/Data Quality Assessment	2-14
2.3.2 Data Usability	2-15
2.3.3 Evaluation of Sample Quantitation Limits	2-16
2.4 SELECTION OF CHEMICALS OF POTENTIAL CONCERN	2-16
2.4.1 COPC Screening Process	2-17
2.4.2 Comparison to Background Concentrations	2-18
2.4.3 Essential Nutrients	2-19
2.4.4 Frequency of Detection	2-20
2.4.5 Comparison to Screening Values and Risk-Based Preliminary Remediation Goals	2-20
2.5 RESULTS OF COPC SCREENING	2-21
2.5.1 Soil/Sediment	2-21
2.5.2 Tap Water	2-23
2.5.3 Surface Water	2-24
2.5.4 Groundwater	2-25
2.5.5 House Dust	2-26

2.5.6	Air	2-26
2.5.7	Fish	2-27
2.5.8	Homegrown Vegetables	2-27
2.5.9	Water Potatoes	2-27
2.6	SUMMARY OF CHEMICALS OF POTENTIAL CONCERN	2-27
3.0	EXPOSURE ASSESSMENT	3-1
3.1	CHARACTERIZATION OF EXPOSURE SETTING	3-1
3.1.1	Physical Setting	3-1
3.1.2	Coeur d’Alene Basin Demographics	3-3
3.1.3	Human Health Exposure Areas	3-14
3.1.4	Characterization of Potentially Exposed Populations	3-15
3.1.5	Populations of Potential Concern	3-19
3.2	IDENTIFICATION OF EXPOSURE PATHWAYS	3-22
3.2.1	Sources, Fate and Transport, and Affected Media	3-23
3.2.2	Potentially Complete Pathways Excluded From Quantification	3-24
3.2.3	Complete Pathways Selected for Quantification	3-26
3.2.4	Potential Coeur d’Alene Tribal Pathways Selected for Quantification	3-28
3.2.5	Complete Exposure Pathways Quantified by Area	3-34
3.3	QUANTIFICATION OF EXPOSURE TO NON-LEAD CHEMICALS	3-34
3.3.1	Exposure Point Concentration	3-34
3.3.2	Estimation of Chemical Intakes	3-41
3.3.3	Exposure Factors	3-46
3.4	QUANTIFICATION OF LEAD EXPOSURE	3-56
3.4.1	Child Lead Model Overview	3-56
3.4.2	Adult Lead Model Overview	3-57
3.5	SUMMARY OF EXPOSURE ASSESSMENT	3-58
4.0	HUMAN HEALTH TOXICITY ASSESSMENT	4-1
4.1	ORAL TOXICITY CRITERIA	4-1
4.1.1	Cancer Effects	4-1
4.1.2	Noncancer Effects	4-2
4.2	DERMAL TOXICITY CRITERIA	4-2
4.3	CHEMICAL PROFILES	4-3
4.3.1	Antimony	4-3
4.3.2	Arsenic	4-4
4.3.3	Cadmium	4-7
4.3.4	Iron	4-9
4.3.5	Lead	4-11
4.3.6	Manganese	4-14
4.3.7	Mercury	4-15
4.3.8	Zinc	4-17

5.0	RISK CHARACTERIZATION FOR NON-LEAD CHEMICALS	5-1
5.1	METHODOLOGY FOR ASSESSING NONCANCER HAZARD	5-1
5.2	METHODOLOGY FOR ASSESSING CANCER RISK	5-2
5.3	RISK CHARACTERIZATION RESULTS	5-2
5.3.1	Noncancer Hazard	5-3
5.3.2	Cancer Risks	5-6
5.3.3	Hazards/Cancer Risks for Combinations of Scenarios	5-7
5.3.4	Subsistence Risks and Hazards	5-9
5.4	SUMMARY OF RISK CHARACTERIZATION	5-11
5.5	POTENTIAL PRELIMINARY REMEDIATION GOALS FOR ARSENIC	5-12
6.0	CHARACTERIZATION OF LEAD HEALTH RISK	6-1
6.1	INTRODUCTION/METHODOLOGY	6-1
6.1.1	Lead Health Risk Assessment for the Resident Population	6-2
6.1.2	Lead Health Risk Assessment for the Coeur d'Alene Tribe	6-5
6.2	OBSERVED BLOOD LEAD LEVELS	6-7
6.2.1	Blood Lead Health Criteria	6-7
6.2.2	State of Idaho / Panhandle Health District Children's Blood Lead Survey Results	6-10
6.2.3	Summary Results for Follow-up Investigations of High Blood Lead Children	6-14
6.2.4	Adult Blood Lead Survey Results	6-17
6.2.5	Coeur d'Alene Tribe Blood Lead Levels	6-17
6.3	LEAD EXPOSURE PATHWAYS	6-18
6.3.1	Dietary Lead Sources	6-18
6.3.2	Lead in Water	6-18
6.3.3	Lead in Air	6-19
6.3.4	Lead in Paint	6-19
6.3.5	Lead in Soils and Dusts	6-20
6.4	SITE-SPECIFIC BLOOD LEAD AND ENVIRONMENTAL EXPOSURE ANALYSIS	6-22
6.4.1	Correlation Analysis	6-22
6.4.2	Regression Analysis	6-23
6.4.3	Summary of Site-Specific Lead Health Analysis	6-28
6.5	BASELINE AND INCREMENTAL LEAD EXPOSURE INTAKE RATES	6-30
6.5.1	Exposure Routes Considered	6-30
6.5.2	Developing Baseline Intake Rates for the Resident Population	6-32
6.5.3	Developing Incremental Intake Rates for the Resident Population	6-34
6.5.4	Developing Intake Rates for the Coeur d'Alene Tribe	6-40
6.6	ESTIMATED BASELINE BLOOD LEAD LEVELS	6-43
6.6.1	Childhood Baseline Blood Lead Levels	6-44
6.6.2	Resident Children's Incremental Blood Lead Levels	6-47

6.6.3	Adult Model Blood Lead Estimates	6-50
6.6.4	Native American Blood Lead Levels	6-51
6.7	RISK CHARACTERIZATION	6-52
6.7.1	Overview and Summary	6-52
6.7.2	Indices of Lead Health Risk	6-53
6.7.3	Observed Blood Lead Levels	6-53
6.7.4	Site-specific Analysis of Paired Blood Lead and Environmental Source Observations	6-54
6.7.5	Predicted Blood Lead Levels	6-54
6.7.6	Potential Lead Health Risk Reduction Strategies	6-58
7.0	UNCERTAINTIES IN RISK ASSESSMENT	7-1
7.1	FACTORS LEADING TO POSSIBLE OVERESTIMATION OF RISK	7-3
7.1.1	Data Collection and Evaluation	7-3
7.1.2	Exposure Assessment	7-5
7.1.3	Toxicity Assessment and Risk Calculations	7-7
7.2	FACTORS LEADING TO POSSIBLE UNDERESTIMATION OF RISK	7-10
7.2.1	Data Collection and Evaluation	7-10
7.2.2	Exposure Assessment	7-12
7.2.3	Toxicity Assessment and Risk Calculations	7-15
7.3	FACTORS LEADING TO POSSIBLE UNDERESTIMATION OR OVERESTIMATION OF RISK	7-18
7.3.1	Data Collection and Evaluation	7-18
7.3.2	Exposure Assessment	7-22
7.3.3	Toxicity Assessment	7-23
7.3.4	Risk Calculations	7-26
7.4	UNCERTAINTIES IN LEAD RISK ASSESSMENT	7-26
7.4.1	Uncertainty in the Use of Observed Blood Lead Levels	7-26
7.4.2	Uncertainty in Data Collection and Evaluation	7-32
7.4.3	Uncertainty in Exposure Assessments	7-39
7.4.4	Uncertainty in Blood Lead Level Modeling	7-44
7.4.5	Uncertainty Regarding Candidate Risk Reduction Activities	7-49
8.0	SUMMARY AND CONCLUSIONS	8-1
8.1	PURPOSE	8-1
8.2	STUDY AREA	8-2
8.3	RESIDENT POPULATION, LAND-USE, ECONOMY AND HOUSING	8-3
8.4	DATA USED IN THE HHRA	8-4
8.5	CHEMICALS OF POTENTIAL CONCERN	8-6
8.6	TOXICITY ASSESSMENT	8-7
8.7	EXPOSURE SUBAREAS	8-7
8.8	POPULATIONS OF POTENTIAL CONCERN	8-8

8.9	RECEPTORS, EXPOSURE PATHWAYS AND SELECTED SCENARIOS .	8-10
8.10	HUMAN HEALTH RISK CHARACTERIZATION FOR METALS OTHER THAN LEAD	8-12
8.10.1	Non-carcinogenic Risk	8-12
8.10.2	Arsenic Carcinogenic Risks	8-13
8.10.3	Non-lead RME Residential and Neighborhood Risks and Hazards ..	8-15
8.10.4	Non-lead RME Public Recreational Risks and Hazards	8-16
8.10.5	Non-lead RME Occupational Risks and Hazards (Construction Worker)	8-16
8.10.6	Non-lead RME Modern and Traditional Subsistence Exposure Scenarios (Tribal Members)	8-16
8.10.7	Risks and Hazards for Combined Non-lead Exposures	8-17
8.10.8	Potential Preliminary Remediation Goals for Arsenic	8-17
8.11	HUMAN HEALTH RISK CHARACTERIZATION FOR LEAD	8-18
8.11.1	Observed Blood Lead Levels	8-18
8.11.2	Representativeness of the Surveys	8-19
8.11.3	Follow-up of Children with High Blood Lead Levels	8-19
8.11.4	Site-specific Analysis of Paired Blood and Environmental Lead Data	8-20
8.11.5	Biokinetic Predictions of Resident Children's Blood Lead Levels ...	8-20
8.11.6	Lead Health Risks from Exposures Outside the Residential Environment	8-22
8.11.7	Native American Blood Lead Levels	8-23
8.11.8	Lead Health Risk Reduction Strategies	8-23
8.11.9	Biokinetic Blood Lead Modeling for Residential Cleanup Levels ...	8-24
8.11.10	Lead Health Risk Reduction for Childhood Recreational Activities ..	8-26
8.11.11	Lead Health Risk Reduction for Childhood Consumption of Local Foodstuff	8-26
8.11.12	Lead Health Risk Reduction for Adult Occupational Activities	8-26
8.11.13	Lead Health Risk Reduction for Adult Recreational Activities	8-26
8.11.14	Lead Health Risk Reduction for Adult Consumption of Local Foodstuff	8-26
8.11.15	Lead Health Risk Reduction for Native American Subsistence Activities	8-27
8.12	RESPONSE TO COMMENTS - PUBLIC REVIEW DRAFT	8-27
8.12.1	General and Specific Responses to Public Comments	8-27
8.12.2	Additional Analysis and Appendices in Responses to Public Comments	8-27
8.12.3	Clarification of USEPA Policy Regarding Human Health Risk Assessment for Lead	8-28
9.0	REFERENCES	9-1

APPENDICES

Appendix A	Risk Assessment Guidance for Superfund (RAGS), Volume 1, Part D, Tables
Appendix B	Expedited Screening Level Risk Assessment for Common Use Areas, Coeur d'Alene River Basin
Appendix C	Summary Table of Potential Receptor Groups
Appendix D	Graphs of Concentration Distributions of Mercury, Thallium, and Manganese
Appendix E	Data Set Used to Calculate Human Health Exposure Point Concentrations
Appendix F	Distribution Checks and Statistical Summaries of Data by Geographical Area and Medium
Appendix G	95 Percent Upper Confidence Limit Statistical Summary Results by Geographical Area and Medium
Appendix H	Toxicity Profiles for Chemicals of Potential Concern
Appendix I	Graphs and Statistical Analysis of House Dust Concentrations
Appendix J	Potential Dose from Consumption of Beef
Appendix K	Summary Statistics for Antimony, Arsenic, Cadmium, Iron, Manganese, and Zinc for the Fall 1999 Coeur d'Alene Basin Sampling Event
Appendix L	Summary Statistics for Antimony, Arsenic, Cadmium, Iron, Manganese, and Zinc for the Summer 1999 Coeur d'Alene Basin Sampling Event
Appendix M	QA/QC Memoranda for the Summer and Fall 1999 Coeur d'Alene Basin Sampling Events
Appendix N	Proposed Geographic Subdivisions and Archived Reanalysis Results for the Coeur d'Alene Basin Human Health Risk Assessment
Appendix O	Selected EPA Guidance Documents for Lead
Appendix P	Baseline Intakes for the EPA Default and Box Model Scenarios by Area and by Age Level
Appendix Q	Development of the IEUBK Bunker Hill Superfund Site Models and Bioavailability Estimates
Appendix R	Observed and Predicted Blood Lead Levels by Age, Area, Dust Concentration and Action Criteria
Appendix S	Heavy Metals Concentrations in Water Potatoes in the Coeur d'Alene Basin, Idaho
Appendix T	Masked Basin HHRA Lead Data
Appendix U	Cancer Rate Analysis in Shoshone County
Appendix V	IEUBK Input Parameters
Appendix W	Comments and Responses on Public Review Draft, July 2000

FIGURES

- ES-1 Coeur d'Alene Basin
- ES-2 Arithmetic and Geometric Mean Blood Lead Concentrations by Geographic Area- 9 Month through 9 Year Old Children (1996-1999 Combined)
- ES-3 Basin Mean Blood Lead Levels by Age (1996-1999 combined)
- ES-4 Percent to Exceed Blood Lead Concentrations by Geographic Area-9 Month through 9 Year old Children (1996-1999 Combined)
- ES-5 Percent of Children to Exceed Critical Toxicity Levels by Age (Basin-wide 1996-1999 Combined)
- ES-6 Observed and Predicted Geomean Blood Lead Levels for 0-84 Month Old Children Only-IEUBK Batch Mode
- ES-7 Observed and Predicted Percent to Exceed 10 Fg/dl for 0-84 Month Old Children-IEUBK Batch Mode

- 1-1 Site Location Map

- 2-1 Stream Segments in Eastern Portion of Coeur d'Alene River Basin
- 2-2 Stream Segments in Western Portion of Coeur d'Alene River Basin

- 3-1a Basin Study Regions
- 3-1b Census Block Groups Overlaid Onto Basin Study Areas
- 3-2 Coeur d'Alene River Basin School District Enrollment 1990 to 2000
- 3-3 Lower Basin Conceptual Site Model
- 3-4 Kingston Conceptual Site Model
- 3-5 Side Gulches Conceptual Site Model
- 3-6 Osburn Conceptual Site Model
- 3-7 Silverton Conceptual Site Model
- 3-8 Wallace Conceptual Site Model
- 3-9 Ninemile Conceptual Site Model
- 3-10 Mullan Conceptual Site Model
- 3-11 Blackwell Island Conceptual Site Model
- 3-12 Baseline Risk Assessment for Area 5 Lower Basin Area "Southwestern Section"
- 3-13 Baseline Risk Assessment for Area 5 Lower Basin Area "Central Section"
- 3-14 Baseline Risk Assessment for Area 5 Lower Basin Area "Northeastern Section"
- 3-15 Baseline Risk Assessment for Area 4 Kingston Area
- 3-16 Baseline Risk Assessment for Area 3 Side Gulches Area
- 3-17 Baseline Risk Assessment for Area 7 Silverton Area
- 3-18 Baseline Risk Assessment for Area 8 Wallace Area
- 3-19 Baseline Risk Assessment for Osburn, Silverton and Wallace Areas Combined, Soil/Sediment Sampling Locations
- 3-20 Baseline Risk Assessment for Osburn, Silverton and Wallace Areas Combined, Surface Water Sampling Locations

- 3-21 Baseline Risk Assessment for Area 2 Burke/Ninemile Area, Soil/Sediment Sampling Locations
- 3-22 Baseline Risk Assessment for Area 2 Burke/Ninemile Area, Surface Water Sampling Locations
- 3-23 Baseline Risk Assessment for Area 2 Burke/Ninemile Area, Groundwater Sampling Locations
- 3-24 Baseline Risk Assessment for Area 1 Mullan Area “West Section”
- 3-25 Baseline Risk Assessment for Area 1 Mullan Area “East Section”
- 3-26 Baseline Risk Assessment for Blackwell Island Area

- 5-1 Summary of Total RME Noncancer Hazard
- 5-2 Total RME Noncancer Hazard—Residential (Child 0 - 6), All Chemicals
- 5-3 Total RME Noncancer Hazard—Residential (Child/Adult), All Chemicals
- 5-4 RME Noncancer Hazard—Residential (Child 0 - 6), by Chemical
- 5-5 RME Noncancer Hazard—Residential (Child/Adult), by Chemical
- 5-6 RME Noncancer Hazard—Future Residential, Burke/Ninemile
- 5-7 Total RME Noncancer Hazard—Neighborhood Recreational (Child 4 - 11), All Chemicals
- 5-8 RME Noncancer Hazard—Neighborhood Recreational (Child 4 - 11), by Chemical
- 5-9 Total RME Noncancer Hazard—Public Recreational (Child 0 - 6), All Chemicals
- 5-10 RME Noncancer Hazard—Public Recreational (Child 0 - 6), by Chemical
- 5-11 RME Noncancer Hazard—Occupational (Adult), by Chemical
- 5-12a RME Noncancer Hazard—Recreational Fish Consumption (Adult)
- 5-12b RME Noncancer Hazard—Residential Vegetable Consumption
- 5-13 Summary of RME Cancer Risk
- 5-14 RME Cancer Risk—Residential
- 5-15 RME Cancer Risk—Neighborhood Recreational (Child 4 - 11)
- 5-16 RME Cancer Risk—Public Recreational
- 5-17 RME Cancer Risk—Occupational (Adult)
- 5-18 RME Noncancer Hazard—Residential Plus Neighborhood Recreational, All Chemicals
- 5-19 RME Cancer Risk—Residential Plus Neighborhood Recreational
- 5-20 Total RME Noncancer Hazard—Modern and Traditional Subsistence Exposure Scenarios, All Chemicals (Child Age 0 to 6 years)
- 5-21 Total RME Noncancer Hazard—Modern and Traditional Subsistence Exposure Scenarios, All Chemicals (Adult/Child)
- 5-22 Total RME Cancer Risk—Modern and Traditional Subsistence Exposure Scenarios (Adult/Child)

- 6-1a Arithmetic and Geometric Mean Blood Lead Concentrations by Geographic Area - 9 Month Through 9 Year Old Children (1996 - 1999 combined)
- 6-1b Percent to Exceed Blood Lead Concentrations by Geographic Area - 9 Month Through 9 Year old Children (1996 - 1999 combined)
- 6-2 Basin Mean Blood Lead Levels by Age (1996 - 1999 combined)

- 6-3 Percent of Children to Exceed Critical Toxicity Levels by Age (Basin-wide 1996 - 1999 combined)
- 6-4 Geometric Mean Adult Blood Lead Levels by Age and Geographic Area
- 6-5 Geometric Mean and Maximum Blood Lead Levels for Reproductive Aged Females (17-45 Years Old) by Geographic Area
- 6-6 Environmental Pathways for Lead Exposure for the Bunker Hill Site
- 6-7a Geometric Mean Interior Paint Lead Loading by Geographic Area
- 6-7b Geometric Mean Exterior Paint Lead Loading by Geographic Area
- 6-8a Arithmetic Mean Soil and House Dust Lead Concentrations by Geographic Area
- 6-8b Arithmetic Mean Soil and House Dust Lead Concentrations by Geographic Area
- 6-8c Geometric Mean Soil and House Dust Lead Concentrations by Geographic Area
- 6-9a Geometric Mean Dust Mat Lead Concentration by Geographic Area
- 6-9b Geometric Mean Dust Loading Rate by Geographic Area
- 6-9c Geometric Mean Dust Mat Lead Loading Rate by Geographic Area
- 6-10a Scatterplots for Blood Lead Concentration and Environmental Source Variables
- 6-10b Scatterplots for Dust Lead and Environmental Source Variables
- 6-10c Scatterplots for Dust Lead Loading and Environmental Source Variables
- 6-10d Scatterplots for Vacuum Dust Concentration and Environmental Variables
- 6-11 Percentage of Blood Lead Observations ≥ 10 ug/dl Associated with an Interior Lead Paint Hazard
- 6-12a Comparison of Geometric Mean Environmental Lead Levels Between High and Low Blood Lead Levels in Children (1-9 yrs.) Exposed to an Interior Lead Paint Hazard
- 6-12b Comparison of Geometric Mean Environmental Lead Levels Between High and Low Blood Lead Levels in Children (1-9 yrs.) Not Exposed to an Interior Lead Paint Hazard
- 6-13 Geometric Mean Dust Mat and Vacuum Bag Dust Lead Concentration by Geographic Area
- 6-14a Estimated Lead Intake for Four-year-old Children by Geographic Area - EPA Default
- 6-14b Estimated Lead Intake for Four-year-old Children by Geographic Area - Box Model
- 6-15a Occupational CT Lead Intake Rates Compared to Baseline
- 6-15b Occupational RME Lead Intake Rates Compared to Baseline
- 6-16a Summary of Children's Recreational Potential Incremental Lead Intakes - CT
- 6-16b Summary of Children's Recreational Potential Incremental Lead Intakes - RME
- 6-16c Summary of Adult Recreational Potential Incremental Lead Intakes -CT
- 6-16d Summary of Adult Recreational Potential Incremental Lead Intakes - RME
- 6-17a Estimated CT Tribal Children Lead Intake Rates
- 6-17b Estimated RME Tribal Children Lead Intake Rates
- 6-18a Estimated CT Tribal Adult Lead Intake Rates
- 6-18b Estimated RME Tribal Adult Lead Intake Rates
- 6-19a Observed and Predicted Geomean Blood Lead Levels for 9-84 Month Old Children Only-IEUBK Batch Mode
- 6-19b Observed and Predicted Blood Lead Levels for 9-60 Month Old Children-IEUBK Batch Mode

- 6-19c Observed and Predicted Blood Lead Levels for 9-24 Month Old Children-IEUBK Batch Mode
- 6-20a Observed and Predicted Percent to Exceed 10 Fg/dl for 9-84 Month Old Children-IEUBK Batch Mode
- 6-20b Observed and Predicted Percent to Exceed Levels for 9-60 Month Old Children-IEUBK Batch Mode
- 6-20c Observed and Predicted Percent to Exceed Levels for 9-24 Month Old Children-IEUBK Batch Mode
- 6-21a Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Mullan
- 6-21b Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Burke/Nine Mile
- 6-21c Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Wallace
- 6-21d Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Silverton
- 6-21e Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Osburn
- 6-21f Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Side Gulches
- 6-21g Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Kingston
- 6-21h Incremental Blood Lead Estimates for 0-9 Year-Old Children by Recreational Activity and Local Foodstuff - Lower Basin
- 6-22a Estimated Percent of Children to Exceed 10 µg/dl Blood Lead Associated with Various Yard Soil Cleanup Action Criteria Using Different Dust Concentrations - Wallace
- 6-22b Estimated Percent of Children to Exceed 10 µg/dl Blood Lead Associated with Various Yard Soil Cleanup Action Criteria Using Different Dust Concentrations - Lower Basin
- 6-23a Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Mullan
- 6-23b Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Burke/Nine Mile
- 6-23c Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Wallace
- 6-23d Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Silverton
- 6-23e Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Osburn
- 6-23f Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Side Gulches
- 6-23g Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Kingston

- 6-23h Estimated Community Geometric Mean Dust Mat, Vacuum, and Soil Lead Concentrations for Various Yard Soil Action Levels - Lower Basin
- 6-24a Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Mullan
- 6-24b Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Burke/Nine Mile
- 6-24c Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Wallace
- 6-24d Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Silverton
- 6-24e Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Osburn
- 6-24f Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Side Gulches
- 6-24g Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Kingston
- 6-24h Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Lower Basin

- 7-1 Cadmium Concentrations in All Vegetables and Soil
- 7-2 Cadmium Concentrations in Leafy Vegetables and Soil
- 7-3 Cadmium Concentrations in Root Vegetables and Soil

- 8-1 Coeur d'Alene Basin
- 8-2 Percent to Exceed Blood Lead Concentrations by Geographic Area - 9 Month through 9 Year old Children (1996 - 1999 Combined)
- 8-3 Arithmetic and Geometric Mean Blood Lead Concentrations by Geographic Area - 9 Month through 9 Year Old Children (1996 - 1999 Combined)
- 8-4 Basin Mean Blood Lead Levels by Age (1996 - 1999 combined)
- 8-5 Percent of Children to Exceed Critical Toxicity Levels by Age (Basin-wide 1996 - 1999 Combined)
- 8-6 Observed and Predicted Geomean Blood Lead Levels for 0-84 Month Old Children Only - IEUBK Batch Mode
- 8-7 Observed and Predicted Percent to Exceed 10 µg/dl for 0-84 Month Old Children-IEUBK Batch Mode
- 8-8a Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Mullan
- 8-8b Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Burke/Nine Mile
- 8-8c Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Wallace

- 8-8d Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Silverton
- 8-8e Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Osburn
- 8-8f Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Side Gulches
- 8-8g Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Kingston
- 8-8h Predicted Percentage of 0-84 Month Old Children to Exceed 10 µg/dl Blood Lead for Various Yard Soil Action Levels - Lower Basin

TABLES

- ES-1 Selected Chemicals of Potential Concern in Each Medium
- ES-2 RME Hazard Quotients and Cancer Risks for Arsenic for Modern and Traditional Future Subsistence Exposure Scenarios
- ES-3 RME Hazard Quotients and Cancer Risks for Residential and Neighborhood Scenarios
- ES-4 RME Hazard Quotients and Cancer Risks for Public Recreational Scenario
- ES-5 RME Hazard Quotients and Cancer Risks for Occupational Scenario

- 2-1 Stream Segments and Beach Sites in CSM Units, 1, 2, 3, and 4
- 2-2 Chemicals With Sample Quantitation Limits Exceeding Screening Values
- 2-3 Potential Background Concentrations for Soil, Surface Water, and Groundwater
- 2-4 Soil Screening Values for Air Pathway
- 2-5 Summary of Analytical Results for Chemicals in Soil/Sediment With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-6 Summary of Analytical Results for Chemicals in First-Run Tap Water With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-7 Summary of Analytical Results for Chemicals in Flushed-Line Tap Water With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-8 Summary of Analytical Results for Chemicals in Surface Water With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-9 Summary of Analytical Results for Chemicals in Groundwater With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-10 Summary of Analytical Results for Chemicals in House Dust With Concentrations Exceeding Screening Values in More Than 10 Percent of Samples
- 2-11 Summary of Analytical Results for Chemicals in Air With Concentrations Exceeding Screening Values in Any Sample
- 2-12 COPCs Selected for Each Medium

- 3-1a Summary of Basin Geographic Areas and Population (Source: 1990 Census Data)
- 3-1b Survey Subareas Included Within Proposed HHRA Geographic Subdivision

- 3-2 Basin Demographics Over Time (Source: County Profiles of Idaho, IDOC and 1990 Census)
- 3-3 Census Block Groups Falling Partially Outside of Basin Study Area Boundaries (Source: 1990 Census)
- 3-4 Summary Population Characteristics
- 3-5 Household Characteristics (Source: 1990 Census)
- 3-6 Housing Characteristics (Source 1990 Census)
- 3-7 Comparison of Median Values of Housing (Source: 1990 Census)
- 3-8 Student Population and Educational Attainment (Source: 1990 Census)
- 3-9 Basin Area Household Income (Source: 1990 Census)
- 3-10 Shoshone County Profile (Source: Profile of Rural Idaho, IDOC)
- 3-11 Kids Count Data as Presented in Yearly Reports (Source: Idaho KIDS COUNT: Profiles of Child Well-Being 1996-2000)
- 3-12 1999-2000 Kids Count Data - Economic Well Being (Source: Idaho KIDS COUNT: Profiles of Child Well-Being 1999-2000 and School District Data)
- 3-13 1999-2000 Kids Count Data - Child Population Change (Source: Idaho KIDS COUNT: Profiles of child Well-being 1999-2000)
- 3-14 School District Data (Source: School Districts #391, 392, and 393)
- 3-15 School District Enrollment by Grade (Source: School Districts #391, 392, and 393)
- 3-16 Estimated Child Population and Sample Population (Sources: 1990 Census, Idaho KIDS COUNT, and School District Data)
- 3-17 Public and Private Sewer and Water Hookups (Source: 1990 Census and 1999 Sewer District (SD) data)
- 3-18 Estimated Number of Housing Units by Basin Area (Source: 1990 Census and 1999 Sewer District Data)
- 3-19a Summary of Exposure Pathways Quantified in HHRA
- 3-19b Tribal Exposure Routes To Be Considered
- 3-20 Summary of Exposure Point Concentrations for Reasonable Maximum Exposure
- 3-21 Number of Samples Used to Calculate Exposure Point Concentrations
- 3-22 Residential Exposure Factors
- 3-23 Neighborhood Recreational Exposure Factors
- 3-24 Public Recreational Exposure Factors
- 3-25 Occupational Exposure Factors
- 3-26a Traditional Subsistence Scenario Exposure Factors
- 3-26b Modern Subsistence Scenario Exposure Factors

- 4-1 Oral Toxicity Criteria
- 4-2 Lowest-Observed-Effect Levels in Children Exposed to Lead
- 4-3 Lowest-Observed-Effect Levels in Adults Exposed to Lead

- 5-1 Summary of Hazard/Risk Estimates and Risk Drivers
- 5-2 Chemicals With Hazard Indices Greater Than or Equal to 1

- 5-3 Summary of Hazard/Risk Estimates for Combined Child/Adult Residential and Neighborhood Recreational Scenarios
- 5-4 Summary of RME Hazard/Risk Estimates and Risk Drivers for Modern Subsistence Exposure Scenario
- 5-5 Summary of RME Hazard/Risk Estimates and Risk Drivers for Traditional Subsistence Exposures
- 5-6 Potential Preliminary Remediation Goals for Arsenic
- 5-7 Summary of the Percent of Basin Residences with 95 Percent UCL Arsenic Concentrations Exceeding Selected Potential PRGs

- 6-1a Summary of Basin Blood Lead Level Observations by Year (9 Month to 9 Year Old Children)
- 6-1b Summary of the Number of Blood Lead Observations and Repeat Children
- 6-2 Annual Blood Lead Summary Data by Geographic Subarea for Children (Fg/dl) (9 Months Through 9 Years)
- 6-3 Geographic Subarea Blood Lead Summary Data for All Children (1 year through 9 years old) For All Years (Fg/dl)
- 6-4a Basin Blood Lead Levels for 1-9 Year Old Children, All Years Combined (Fg/dl)
- 6-4b Basin Blood Lead Levels for 1-6 Year Old Children, All Years Combined (Fg/dl)
- 6-4c Basin Blood Lead Levels for 1-7 Year Old Children, All Years Combined (Fg/dl)
- 6-5 Basin Blood Lead Levels by Geographic Area and Age (µg/dl)
- 6-6a Basin-wide Blood Lead Level Summary for 1 Through 6 Year Old Children by Area (Survey Results-All Years)
- 6-6b Basin-wide Blood Lead Level Summary for 1-7 Year Old Children by Area (Survey Results-All Years)
- 6-7 Comparison of Coeur d'Alene and BHSS Results to National and State-Wide Blood Lead Levels
- 6-8a Summary of Adult Blood Lead Levels by Age and Geographic Subarea (Fg/dl)
- 6-8b Observed Blood Lead Levels for Reproductive Aged Females (Fg/dl) by Geographic Subarea
- 6-9 Dietary Lead Summary from IEUBK Model for Children
- 6-10 Summary of Garden, Fish, and Riparian Vegetation Lead Levels
- 6-11a Mullan: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11b Burke/Nine Mile: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11c Wallace: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11d Silverton: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11e Osburn: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)

- 6-11f Side Gulches: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11g Kingston: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11h Lower Basin: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11i Harrison: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-11j Rocky Point: Summary Lead Concentration Data for Environmental Media (mg/kg) and Percent of Soil/Dust Samples by Concentration Category (mg/kg)
- 6-12a Summary of CUA Surface Water Lead Concentration (Disturbed Samples)(Fg/L)
- 6-12b Summary of CUA Surface Water Lead Concentration (Undisturbed Samples)(Fg/L)
- 6-13 Paint Lead Loadings by Geographic Area
- 6-14 Summary of Neighborhood Stream Sediment Lead Levels by Geographic Subarea
- 6-15a Summary of Surface Soil Lead Levels for Common Use Areas (mg/kg)
- 6-15b Summary of Sediment Lead Levels for Common Use Areas (mg/kg)
- 6-16 Summary of Lead Concentration for Waste Pile Soils (mg/kg)
- 6-17 Mat Dust Lead Concentration, Dust Loading, and Lead Loading for the Coeur d'Alene Basin
- 6-18 Summary of Lead Concentrations for Sediment and Surface Soil in the Lower Basin
- 6-19 Correlation Matrix for Blood Lead Levels and Environmental Source Variables
- 6-20 Correlation Matrix for House Dust Lead Levels and Environmental Source Variables
- 6-21 General Linear Model and Regression Coefficients for Blood Lead and Environmental Sources
- 6-22a General Linear Model and Regression Coefficients for Entryway Mat Lead Concentration and Environmental Sources
- 6-22b General Linear Model and Regression Coefficients for Entryway Mat Lead Concentration and Environmental Sources
- 6-22c General Linear Model and Regression Coefficients for Entryway Mat Lead Concentration and Environmental Sources (Final Model)
- 6-22d General Linear Model and Regression Coefficients for Dust Mat Lead Loading and Environmental Sources
- 6-23 General Linear Model and Regression Coefficients for Vacuum Bag Lead Concentration and Environmental Sources
- 6-24a IEUBK Default Inhalation and Ingestion Parameters
- 6-24b EPA Adult Model Default Ingestion Parameters
- 6-25a Four Year Old Children's Baseline Lead Intake Rates for Ingestion of Soil and Dust - EPA Default
- 6-25b Four Year Old Children's Baseline Lead Intake Rates for Ingestion of Soil and Dust - Box Model
- 6-26 Adult Baseline Lead Intake Rates for Ingestion of Soil and Dust
- 6-27a Adult Occupational Exposure Factors for Non-lead Soil Related Activities Ingestion

- 6-27b Adult Occupational Exposure Factors for Lead Soil Related Activities Ingestion
- 6-27c EPA Adult Lead Default Values for Non-Soil Related Activities
- 6-28a Estimated Occupational Intake Rates Associated with Community Soils for Geographic Subareas Using Non-Lead Ingestion Rates
- 6-28b Estimated Occupational Intake Rates Associated with Community Soils for Geographic Subareas Using EPA Adult Model Ingestion Rates
- 6-29a Estimated Occupational Incremental Lead Intake Rates for Potential Soil Lead Concentration Levels using Non-lead Ingestion Rates
- 6-29b Estimated Occupational Incremental Lead Intake Rates for Potential Soil Lead Concentration Levels using Lead Soil Related Ingestion Rates
- 6-30 Occupational Lead Intake Rates for Adult Occupational Scenarios
- 6-30a Percentile Lead Concentration for Occupational Soils
- 6-30b Percentile Lead Intake Rates For Occupational Soils
- 6-30c Central Tendency and Reasonable Maximum Exposure Lead Intakes Compared to Baseline
- 6-31 Recreational Exposure Factors
- 6-32a Incremental Sediment/Soil Ingestion Lead Intake for Children-Central Tendency (CT)
- 6-32b Incremental Sediment/Soil Ingestion Lead Intake for Children- Reasonable Maximum Exposure (RME)
- 6-32c Incremental Sediment/Soil Ingestion Intake for Adults-Central Tendency (CT) and Reasonable Maximum Exposure (RME)
- 6-33 Recreational Surface Water Exposure Factors
- 6-34a Incremental Recreational Surface Water Ingestion Lead Intake Rates for Children
- 6-34b Incremental Recreational Surface Water Ingestion Lead Intake Rates for Adults
- 6-35 Upland Parks Incremental Intakes for Children
- 6-35a Percentile Surface Soil Lead Concentrations
- 6-35b Lead Intakes Associated with Concentration Percentiles
- 6-35c Incremental Central Tendency and Reasonable Maximum Exposure Intake Rates Compared to Baseline
- 6-36 Neighborhood Stream Incremental Intakes for Children 4 Years Through 11 Years Old
- 6-36a Percentile Lead Concentration for Sediment and Surface Water
- 6-36b Percentile Lead Intake Rates for Sediment and Surface Water
- 6-36c Central Tendency and Reasonable Maximum Exposure Intake Estimates Compared to Baseline
- 6-37 CUA Public Beach Incremental Intakes for Children 0 Through 6 Years Old
- 6-37a Percentile Lead Concentrations for Sediments and Surface Water
- 6-37b Percentile Lead Intake Rates by Media
- 6-37c Central Tendency and Reasonable Maximum Exposure Lead Intake Rates Compared to Baseline
- 6-38 Incremental Lead Intake Rates for Waste Piles for Children 4 through 11 Years Old
- 6-38a Percentile Lead Concentrations for Waste Pile Soils
- 6-38b Percentile Lead Intake Rates for Waste Piles

- 6-38c Central Tendency and Reasonable Maximum Exposure Incremental Lead Intakes Compared to Baseline
- 6-39 Local Foodstuff Exposure Factors for the Resident Populations
- 6-40a Children's Incremental Lead Intake Rate from Home Grown Produce
- 6-40b Adults' Incremental Lead Intake Rate from Home Grown Foodstuff
- 6-41a Recreational Fish Incremental Intakes for Children
- 6-41b Recreational Fish Incremental Intakes for Adults
- 6-42a Summary of Children's Potential Incremental Intakes (CT)
- 6-42b Summary of Children's Potential Incremental Intakes (RME)
- 6-43a Summary of Adult's Potential Incremental Intakes (CT)
- 6-43b Summary of Adult's Potential Incremental Intakes (RME)
- 6-44a Traditional Tribal Lead Intake Rate Estimates for Children by Quantile Percentages
- 6-44b Traditional Tribal Lead Intake Rate Estimates for Adults by Quantile Percentages
- 6-45 Modern Tribal Lead Intake Rate Estimates for Children by Quantile Percentages
- 6-46 Modern Tribal Lead Intake Rate Estimates for Adults by Quantile Percentages
- 6-47a Predicted and Observed Baseline Blood Lead Levels Community Mode IEUBK- 9-84 Months
- 6-47b Predicted and Observed Baseline Blood Lead Levels Community Mode IEUBK- 9-24 Months
- 6-47c Predicted and Observed Baseline Blood Lead Levels Community Mode IEUBK- 9-60 Months
- 6-48 Summary of Blood Lead, Yard Soil, and Vacuum Dust for IEUBK Batch Mode Input
- 6-49 IEUBK Batch Mode Overall Observed v. Predicted Blood Lead by Age
- 6-50a IEUBK Batch Mode Overall Observed v. Predicted Blood Lead by Geographic Area, Ages 9-84 Months: Default and 40:30:30
- 6-50b IEUBK Batch Mode Observed v. Predicted Blood Lead by Geographic Area, Age 9-60 Months: Default and 40:30:30
- 6-50c IEUBK Batch Mode Observed v. Predicted Blood Lead by Geographic Area, Age 9-24 Months: Default and 40:30:30
- 6-51a Upland Parks Estimated Recreational Blood Lead Increments for 0-84 Month Old Children (CT)
- 6-51b Upland Parks Estimated Recreational Blood Lead Increments for 0-84 Month Old Children (RME)
- 6-52a Neighborhood Stream Recreational Blood Lead Increment for 0-84 Month Old children (CT)
- 6-52b Neighborhood Stream Recreational Blood Lead Increment for 0-84 Month Old Children (RME)
- 6-53a Public Beach Recreational Blood Lead Increment for Children 0-84 Month Old (CT)
- 6-53b Public Beach Recreational Blood Lead Increment for Children 0-84 Month Old (RME)
- 6-54a Waste Pile Recreational Blood Lead Increment for 0-84 Month Old Children (CT)
- 6-54b Waste Pile Recreational Blood Lead Increment for 0-84 Month Old Children (RME)
- 6-55a Home Grown Vegetable Central Tendency (CT) Intakes for Children (0-84 mos.)

- 6-55b Home Grown Vegetable Reasonable Maximum Exposure (RME) Intakes for Children (0-84 mos.)
- 6-56a Recreational Fish Ingestion Central Tendency (CT) Intakes for Children (0-84 mos.)
- 6-56b Recreational Fish Ingestion Reasonable Maximum Exposure (RME) Intakes for Children (0-84 mos.)
- 6-57 Calculations of Preliminary Remediation Goals (PRGs) using the Occupational CT Values
- 6-58 Calculations of Preliminary Remediation Goals (PRGs) using the Occupational RME Values
- 6-59a Calculations of Preliminary Remediation Goals (PRGs) using the Upland Parks CT Values
- 6-59b Calculations of Preliminary Remediation Goals (PRGs) using the CUAs CT Values
- 6-60a Calculations of Preliminary Remediation Goals (PRGs) using the Upland Parks RME Values
- 6-60b Calculations of Preliminary Remediation Goals (PRGs) using the CUA RME Values
- 6-61a Estimated Post-Remedial Blood Lead Levels and Probability to Exceed Health Criteria by Community and Individuals for a 2000 mg/kg Soil Action Level - EPA Default Model
- 6-61b Estimated Post-Remedial Blood Lead Level and Probability to Exceed Health Criteria by Community and Individuals for a 1500 mg/kg Soil Action Level - EPA Default Model
- 6-61c Estimated Post-Remedial Blood Lead Level and Probability to Exceed Health Criteria by Community and Individuals for a 1000 mg/kg Soil Action Level - EPA Default Model
- 6-61d Estimated Post-Remedial Blood Lead Level and Probability to Exceed Health Criteria by Community and Individuals for a 800 mg/kg Soil Action Level - EPA Default Model
- 6-61e Estimated Post-Remedial Blood Lead Level and Probability to Exceed Health Criteria by Community and Individuals for a 600 mg/kg Soil Action Level - EPA Default Model
- 6-61f Estimated Post-Remedial Blood Lead Level and Probability to Exceed Health Criteria by Community and Individuals for a 400 mg/kg Soil Action Level - EPA Default Model
- 6-62a Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 2000 mg/kg Soil Action Level-Box Model
- 6-62b Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 1500 mg/kg Soil Action Level-Box Model
- 6-62c Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 1000 mg/kg Soil Action Level-Box Model
- 6-62d Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 800 mg/kg Soil Action Level-Box Model
- 6-62e Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 600 mg/kg Soil Action Level-Box Model
- 6-62f Estimated Post-Remedial Blood Lead and Risk by Community and Individuals for a 400 mg/kg Soil Action Level-Box Model

- 7-1 Effect of Reduced Dermal Surface Areas (SAs) on Current Total RME Risks and Hazards for the Neighborhood Recreational Scenario
- 7-2 Summary of Geometric Means and Ratios of Chemical Concentrations in House Dust and Yard Soil
- 7-3 Cadmium Concentrations in Vegetables and Soil
- 7-4 Generic and Basin-Specific Elements of Uncertainty in Blood Lead (Pb-B) Data Gathering
- 7-5 Elements of Uncertainty in Environmental Lead Data Gathering and Assessment in The Basin
- 7-6 Elements of Uncertainty in Lead Exposure Data in the Basin
- 7-7 Elements of Uncertainty in IEUBK Modeling of Blood Lead (Pb-B) Levels in the Basin
- 7-8 Summary Statistics for Environmental Variables for All Data and the Subset of Data Paired with Blood Lead Observations

- 8-1 Selected Chemicals of Potential Concern in Each Medium
- 8-2 Health Effects of Exposure to Chemicals of Potential Concern
- 8-3 RME Hazard Quotients and Cancer Risks for Residential and Neighborhood Scenarios
- 8-4 RME Hazard Quotients and Cancer Risks for Public Recreational Scenario
- 8-5 RME Hazard Quotients and Cancer Risks for Occupational Scenario
- 8-6 RME Hazard Quotients and Cancer Risks for Arsenic for Modern and Traditional Future Subsistence Exposure Scenarios